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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,797	02/09/2004	Takeo Igarashi	MS141491.2/MSFTP276USA	9068

27195 7590 07/28/2005

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EXAMINER

WOODS, ERIC V

ART UNIT PAPER NUMBER

2672

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/774,797	<b>Applicant(s)</b> IGARASHI ET AL.	
	<b>Examiner</b> Eric V. Woods	<b>Art Unit</b> 2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 May 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION*****Information Disclosure Statement***

The information disclosure statement filed 21 May 2004 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. The cited US references have been considered, but the Bederson et al reference on page 2 has not been considered. Applicant is required to submit a copy of this reference in response to this Office Action under 37 CFR 1.56, see MPEP 2000 and 2004, section B, *supra*.

***Priority***

Applicant's claim for domestic priority under 35 U.S.C. 119(e) is acknowledged. However, the parent application upon which priority is claimed fails to provide adequate support under 35 U.S.C. 112 for claims at least 3-4, 11, 13-14, and 19 of this application, as explained below in the rejection under 35 U.S.C. 112, first paragraph, as lacking support in the written description. Those features are simply not mentioned in the originally filed case at all, not even in the claims.

Also, examiner asserts that applicant was not in possession of the claimed subject matter at the time the parent case was filed. The original application – 09/460,028 – does not have any claims directed to car navigation systems or the like, only the one sentence suggesting it. Therefore, at **best** applicant will receive a priority date of the filing of the divisional application.

Also, the case as filed is not a proper divisional. The claims as originally filed with the divisional were not present or supported in the parent application. Therefore, designating the case as a DIV is improper. Further, the parent application and the divisional were filed before the new rules concerning preliminary amendments; therefore, even if a preliminary amendment were filed with the parent claim that included such claims, they would have been considered new matter and thusly would not be proper material for a divisional in any case.

The proper status of this case should be a continuation (CON) with the odometer, speedometer, and other similar claims filed as a CIP. Examiner recommends that applicant file a petition to change the status, since it is now over 14 months past the filing date and no changes to the status can be made except by petition.

### ***Specification***

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Applicant is required to amend the specification as per 35 U.S.C. 112, sixth paragraph to recite which means are being used to implement the method of claim 24. It has been clearly established that if the applicant wishes to have the protection of means-plus-function language, applicant must clearly set forth in the specification which means are being used to perform which step.

### ***Drawings***

The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81(c). No new matter may be introduced in the required drawing. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d).

The instant drawings are not sufficient, as they show none of the claimed subject matter.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed features must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

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of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Definitions***

The term "interval" in claims 13 and 14 is being interpreted by examiner as meaning a) a certain speed range of the vehicle or b) a certain distance traveled by the vehicle in a certain time (e.g. the dictionary definition for speed). If applicant wishes to dispute this, applicant must point out where in the specification there is support for an alternate definition. Examiner has been unable to locate another definition.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-26 stand rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for displaying a map, does not reasonably provide enablement for a component that receives speed information relating to a movement of a vehicle. Examiner believes that the specification may not be enabling for a navigation component that modifies the scale of the map display are in response to the speed information. The specification does not enable any person skilled in the art to which it

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pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims for at least the following reasons.

Specifically, the specification never uses the term 'vehicle' outside of the claims.

There is only one sentence in the entire specification that could reasonably be construed as providing enablement for this embodiment, and that is found on page 16, lines 20-24. The first sentence describes showing a map on display in a car, providing enablement for the display. However, the second line only hints at how such a speed relationship would be derived, e.g. "the input provided can be the speed at which the driver is driving", implying that this measure would be derived from the amount of force exerted on the gas pedal.

The problem with claim 1 lies in the fact that the specification (and indeed, the prosecution history for the patent issued for the parent of the divisional applicant) supports only the definition where speed is defined in terms of an input by the user (in Figures 2-4 where the speed-based scaling is demonstrated, and in Figure 6 where a chart showing the desired interrelationship between scaling and speed of navigation is shown.

Next, the dependent claims provide claims for which there is simply no basis for enablement whatsoever; see for example claims 4 and 5. There is no mention of a speedometer or odometer in the specification. There is no mention of an aerial map or a topographic map in the specification as per claim 11. There is nothing in the specification to support any kind of relationship between the speed of a vehicle and the

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scale of the map per se. There are many other failings in these claims, but it is sufficient to prove that the independent claims are not enabled as per above.

Further, all claims (e.g. claims 1-26) stand rejected under 35 U.S.C. 112, first paragraph, as requiring undue experimentation as per *In re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988)(see MPEP 2164).

First of all, the scope and breadth of the claims are not commensurate in scope with the recited claims. The specification does not provide any relationship between how such a system should be made. Applicant appears to argue (or assume *arguendo*) in the specification that car navigation systems and the scaling methods of applicant are well known. Examiner will, for purposes of this rejection only and only for the first action, accept that assertion in order to proceed with the rest of the analysis required under *In re Wands* (see MPEP 2164.08). Still, the art in this area is not crowded. The specification does not assert or show any methods for interconnecting such a system with the instant application, and it would require a great deal of work to engineer such a system (the mechanical sensor would have to be integrated with the navigation system, software would have to be written, etc.) The paucity of evidence in the instant application is quite daunting. There is simply nothing there to support that implementation. No specific examples of how to make such a system in the context of a car navigation system are provide, no working examples or embodiments are provided, and lastly applicant is relying one assertion within the specification.

The inventor provides no working examples and no direction on how to make and/or use such a device. Therefore, both the **direction provided by the inventor** and



the **working examples** tests under *In re Wands* are failed. Questions concerning the prior art will for the moment be set aside because the evidence provided by the other factors under the *In re Wands* standard and tests are sufficient to overcome any evidence from the prior art.

Examiner asserts that a substantial amount of experimentation would be needed to make the invention for at least the reasons set forth above.

Next, the level of ordinary skill in the art would be determined. One of ordinary skill in the art of document navigation interfaces (as per the parent application)(the working examples being prime evidence here) would not, per se, have experience with vehicle navigation interfaces and the **much stricter operational criteria** for such interfaces because of the need for near-real-time responsiveness, requirements not to distract the operator of the vehicle and cause a crash, the much stricter regulatory requirements, and many other levels of evidence.

Therefore, after all analyses have been completed, the rejection of the instant claims under 35 U.S.C. 112, first paragraph, for undue experimentation under the *In re Wands* standard stands.

Finally, applicant clearly suggests using the gas pedal as a user interface for controlling the speed and/or scaling of the map (see 15:21-24). This combination – while perhaps not being inoperative – although examiner asserts that such a combination would in fact be inoperative for practical reasons – would be almost useless in real-world application, because a driver that uses the gas pedal as a control interface would be constantly varying his speed **merely to render the navigation**

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**system operable.** Given that heavy traffic is typical in cities and rush hour situations, the navigation system would behave at best in an unpredictable manner and would at worst simply be unusable because of all the stop-and-go driving and constant increases and decreases in speed because of red lights, traffic control devices, traffic in general, and the like.

It is pointed out (for purposes of appeal) that the **only** embodiment even remotely mentioned in the specification is using the gas pedal as the navigation instrument, and that such an embodiment would also (most likely) never be approved by regulatory authorities because it would be so dangerous for use in the real world and would be so likely to cause wrecks and the like, given how recent studies have shown that driver distraction is at least a contributing factor in the majority of all wrecks in the United States. Finally, again, the use of the gas pedal as an interaction mechanism simply is impracticable and is **not** enabled by the disclosure in any case.

Also, claims 2-11, 13-23, and 24-26 are rejected as failing to corrected the deficiencies of their parent claim(s).

Claims 1-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically, for all the reasons above, all the claims are not supported by the specification.

However, even should the one sentence in the specification be regarded as broadly enabling for the independent claims, the following specific rejections of dependent claims still will stand.

Claims 4-5 are rejected because there is no mention of a speedometer, odometer, or the like in the specification.

Claim 11 is rejected because there is no mention of a topographical map and/or an aerial map; there are not working examples or direct mention of a road map.

Claims 13-14 are rejected because there is no mention of a relationship between the speed of the vehicle with respect to boundaries or intervals per se.

Claim 19 is rejected because there is no direct mention of centering the map.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, in claims 24-26 applicant has not clearly set forth what means are being used to execute which steps of the recited method as required in order to seek protection of the claims under 35 U.S.C. 112, sixth paragraph. There is a statutory requirement to specifically set forth what means correspond to which function, which has not been clarified in the specification. Applicant must either amend the specification to specify which steps correspond to which means, or cancel the instant claims.

Claims 1, 12, and 24 are rejected for using the same word having different meanings within one claim, and thusly being indefinite. Although CAFC ruled in *Texas Digital* that the specification may encompass multiple definitions, this decision was overruled by the CAFC in an *en banc*, precedential decision in *Phillips v. AWH Corp* (2005, No. 03-1269, Fed. Cir. 2005)(2005 U.S. App LEXIS 13954). In any case, *Texas Digital* and its progeny never implied any more than the specification encompassing multiple, consistent definitions varying in breadth. However, in the independent claims applicant has used the **same term with two different meanings in the same claim**, a failing for which the CAFC has held claims fatally flawed, where for example in *Process Control v. HydReclaim* the court found claim 1 to be fatally flawed for having multiple meanings attached to the same term (that then rendered the claim non-statutory, but that is beside the point, as they were also found to be both indefinite and non-enabled). *Process Control* presented the argument that the term should be defined as the specification defined on a per-clause basis, but this argument was thoroughly analyzed and debunked.

Next, attention is drawn to the patent issued on the parent of this divisional application. In that patent, the term "speed" is used to define the rate of movement **of an input device** where such an input device is under **user control** for navigating a **content space**.

The CAFC recently issued an *en banc*, precedential decision in *Phillips v. AWH Corp.*, No. 03-1269, slip op. (Fed. Cir. 2005)(2005 U.S. App LEXIS 13954). This decision stated *inter alia* that dictionaries and external evidence in a case do **not**

dominate or control (see for example page 19, "We have viewed extrinsic evidence in general as less reliable than the patent and its prosecution history in determining how to read claim terms, for several reasons." See Section C, page 23, first paragraph, "... However, while extrinsic evidence 'can shed useful light on the relevant art,' we have explained that it is 'less significant than the intrinsic record in determining the legally operative meaning of claim language'..." Therefore, in light of *Phillips*, the definition in applicant's specification will be treated as controlling – in this case speed is defined as stated above, where applicant's specification supports this definition in 11:3-8.

This is relevant because applicant is redefining the term "speed" for the instant application. The statements in for example 11:3-8 constitute applicant acting as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, where the written description clearly redefines the claim term and sets forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999).

Now, this further (also helps the enablement rejection above) stands as a rejection because in *Process Control*, the court found that even though an applicant is entitled to serve as his own lexicographer, the applicant is **NOT** permitted to redefine a term to have two meanings within one claim – see Discussion, section I-D where the claim 1 is held to be invalid because a term cannot have two meanings within one claim. The claim was found to be invalid for various other reasons additionally.

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Claims 2-11, 13-23, and 25-26 are rejected as failing to correct the deficiencies of their parent claim(s).

\*\*\*Finally, applicant is cautioned that any attempts to introduce new matter into the specification will result in the response to this Office Action being held non-responsive, and applicant will have to withdraw the new matter in any case. Examiner will carefully examine all amendments to the specification to ensure compliance with the "no new matter" requirement.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 12, and 24 are rejected under 35 U.S.C. 103(a) by various references, as set forth below. Two rejections of the independent claims will be made to emphasize the point. There are no common assignees or inventive entities (as relevant) for any

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references used as eligible, therefore no bars under 35 U.S.C. 103(c) exist in this particular case.

**\*\*Please also note that are many other references, for example Nimura et al (US 5,884,218)('Nimura'), that could be used to make the single-reference 103(a) rejections as below. Examiner also points out these references, as explained below, at least anticipate the instant invention, but examiner has performed the rejections under 35 U.S.C. 103(a) because of the indefiniteness of the claims and a desire to expedite prosecution.**

Claim 24 is a means plus function claim performing the same steps as claim 1, where the system in step 1 has elements that correspond to the recited 'means' of applicant. As stated above in the rejection of the claims under 35 U.S.C. 112, first and second paragraphs, it is unclear precisely what applicant is reciting. As such, examiner will treat the claims as requiring a system that performs the recited method claims; e.g. any reference that meets the limitations of claim 1 will also teach claim 24. Examiner will use this interpretation until such time as applicant's representative contests it. Therefore, the rejection of claims 1 and 24 are bound together. Additionally, a system that performs the limitations of claim 1 will also meet the limitations of claim 12, which will be briefly discussed as an addendum to the rejection of claims 1, 12, and 24 together.

Claims 1, 2, 6, 11-14, 16-19, and 23-25 are rejected under 35 U.S.C. 103(a) as unpatentable over Sievers et al (US 6,163,752)('Sievers').

As to claims 1, 12, and 24:

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A navigation system comprising: (Abstract discloses a vehicle navigation system; see also 1:10-45.)

-A display for displaying an area of a map; (Figure 1 shows element 7, which is clearly a display device as per 4:5-22, and it is made clear in 4:35-55 that a map is shown on the display, and further that such display scales the map, which would prima facie require that only an area of the map be shown (also, it would be inherent, given the finite size of the display device))(See also 2:40-60, where prior art is disclosed that performs the recited limitations)

-A component that receives speed information relating to movement of a vehicle; and (obviously, the system of 2:40-65 must clearly have a component that determines speed in order to change the display based on speed)(Clearly, in 3:40-60 the system has a function to measure speed since it both alters map scale and map refresh rates based on average speed, and this obviously requires some kind of component to measure speed.)

-A navigation component that modifies a scale of the map display area as a function of the speed information. (3:19-40 clearly teaches this limitation, where the display is altered based on vehicle speed)(Further, 2:40-60 teaches this limitation.)(Additionally, please claim 5, 6:26-28, where the limitation of changing the scale of the map as a function of vehicle speed is expressly recited).

As stated above, Sievers very clearly teaches a system that alters the display scale based on vehicle speed, and also teaches prior art that does the same function, and claims the same. As such, the above reference renders the instant claim obvious.



As to claim 12, with the specific, different limitations, very clearly the system of Sievers displays a map area to the user in a vehicle, since Sievers is an in-car navigations system, and clearly Sievers teaches selectively indicating position of the vehicle on the map display in 3:10-60, where the user can selectively add or remove points of interest so that the more detailed map will be shown when the vehicle is approaching those points. Clearly, this represents 'selectively indicating position of the vehicle on the map area display'. As noted above, the system of Sievers (and the prior art therein) obviously determines the speed of the vehicle (indeed, in 3:55-60, the system refreshes the display based on the speed of the vehicle). Finally, the system of Sievers as above clearly modifies the scale of the map area display as a function of speed as clearly set forth above.

As to claim 2, the display device showing a map constitutes a graphical user interface or GUI.

As to claim 6, Sievers teaches in 2:54-65 that in prior art, the scale of the map is inversely proportional to speed, e.g. that at low speeds it has a scale of 1:10,000, at intermediate speeds it has a scale of 1:50,000, and at high speeds it has a scale of 1:100,000 which clearly establishes scaling inversely proportional to speed. Sievers' invention essentially is an improvement upon the German invention cited therein in that it sometimes shows a high level of detail where it deems it more useful to the driver (e.g. when approaching an exit on the freeway at high speed). However, the system of Sievers for the most part operates in accordance with the provided prior art, therefore, it would be obvious for Sievers to use that system and utilize inverse scaling.

As to claim 11, clearly Sievers in 1:8-12 teaches the use of road maps in automobiles.

As to claim 13, clearly the system of Sievers (and the prior art taught therein, as in the rejection to claims 1 and 12 above, which is incorporated by reference) teaches that the scale is changed with respect the speed of the vehicle, and clearly it teaches that the display is resized based on the rate of speed of the vehicle, where a low speed and a high speed both constitute "intervals of speed" where an interval is taken to either be a) a range of speed of the vehicle or b) a set distance traveled over a set time by the vehicle.

As to claim 14, the rejection to claim 14 is incorporated by reference. The claimed features are taught by Sievers to be prior art (2:54-64), and it would have been obvious to combine them with Sievers, though examiner contends that they are a part of Sievers in any case.

As to claim 16, Sievers teaches that the map has a maximum scale (and the prior art teaches the same thing (2:5-22), and that it is desired for the operator to have a maximum amount of data at relevant times (3:20-41). Therefore, it would be obvious that since there is a maximum scale factor, there would obviously be a limit as to how fast an imperfect computer could execute such a rapid scaling operation, so there would prima facie be some hardware- and software-induced lag, wherein the system could not zoom in or out any more than to the maximum and/or minimum resolutions supported by the system, so it would be obvious that coupled with the software- and hardware-

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based limitations of a practical system, the system has a practical, if unstated, maximum rate of change of the display device.

As to claim 17, clearly the prior art determines a base scale to display the map area, depending on the speed of the vehicle (see Sievers 2:43-58).

As to claim 18, clearly the prior art (and Sievers) change the scale of the map display area as discussed in the rejection to claims 1 and 12 above, and further in 2:43-58.

As to claim 19, Sievers teaches that the map may be shown to the user with the user and vehicle centered in the middle of the map (4:49-55).

As to claim 23, clearly the scale of the map is modified as per the complexity of the map, as Sievers teaches this limitation in 3:19-41 – except that Sievers uses the terms “density of information” to represent complexity. It would have been obvious to so modify Sievers in any case, as Sievers teaches that high information density can be useful to the user around user-selected key route points, like exits on a freeway.

As to claim 25, Sievers clearly teaches that the prior art has methods for selectively positioning the vehicle on the screen (1:25-57) and Sievers has options such as showing the vehicle in the center of the screen (4:45-65) and the like. IT would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sievers to allow it to incorporate prior art methods of selectively positioning the vehicle on the screen or whatever the exact wording of the claim requires.

Claims 1, 12, and 24 are rejected under 35 U.S.C. 103(a) as obvious in view of Nakayama et al (US 5,732,385)('Nakayama').

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As to claim 12,

A navigation system comprising: (Abstract teaches a vehicle navigation system)

-A display for displaying an area of a map; (element 8, Figure 5A, shows a display)

-A component that receives speed information relating to movement of a vehicle; and  
(element 2, Figure 5A, shows a speed sensor (labeled 'Speed Sensor'), see also 3:45-63, 9:35-65, and the like)

-A navigation component that modifies a scale of the map display area as a function of the speed information. (Abstract, also 8:10-20, where it clearly states that the maps can be displayed with the correct scale ratio according to vehicle speed, where the navigation component is the program operable in the computer of the navigation system).

Nakayama teaches all the limitations of the above claim.

As to claim 2, the display device showing a map constitutes a graphical user interface or GUI.

As to claim 13, clearly the system of Nakayama (and the prior art taught therein, as in the rejection to claims 1 and 12 above, which is incorporated by reference) teaches that the scale is changed with respect the speed of the vehicle, and clearly it teaches that the display is resized based on the rate of speed of the vehicle, where a low speed and a high speed both constitute "intervals of speed" where an interval is taken to either be a) a range of speed of the vehicle or b) a set distance traveled over a set time by the vehicle

Claim 3 is rejected under 35 U.S.C 103(a) as unpatentable over Sievers in view of Sanderson et al (US 6,279,906 B1)('Sanderson').

It is well known to one of ordinary skill in the art (and to an ordinary driver of a car) that the amount of acceleration and/or speed is proportional to the amount of force exerted on an accelerator. Sanderson is directed to a similar problem solving area (e.g. the simulation of the operation of a motor vehicle). Sanderson teaches the use of a video game console with various accessories, including an accelerator pedal – see Figure 1, with element 14, which constitutes foot pedals. It is well known in the art that these pedals would represent those that are standard in a car, e.g. at least brake and accelerator pedals with additional pedals (e.g. clutch) being optional. It is further obvious that such elements can be used to control various systems, and Sanderson clearly teaches that the video game could conceivably be controlled solely by input devices such as a foot pedal (1:35-50), so therefore it would have been obvious that an accelerator pedal could be used to control the scaling of the map, since the Sievers systems clearly teaches that the user can control the scale of the map and that the user can also adjust control points so that the map scales at the correct locations (see the relevant prior art cited in the Background art of Sievers in addition to the citations in claim 1). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the Sievers reference with the Sanderson reference, since Sanderson teaches that foot pedals can be used as input devices with respect to driving simulations and the like, and it would be obvious to use the force exerted on the accelerator as an input. Examiner also takes Official Notice of the fact

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that accelerator pedals in cars generate increases in speed in proportion to the amount of force applied as recited in the instant claim.

Claim 4 is rejected under 35 U.S.C. 103(a) as unpatentable over Sievers in view of Pelin (US 3,618,240).

Sievers teaches a system that obviously monitors the speed of the car, but specific methods of measuring the speed are not provided. Pelin teaches that it is well known in the art to couple a speed indicator to the speedometer cable (1:40-50). It would be obvious to use the method described in Pelin to monitor the speed of the vehicle to provide the speed sensor 2 of Sievers. Motivation to combine is provided by the fact that Pelin provides an old and well-known expedient for measuring the speed of a vehicle for navigation purposes (since Pelin also provides such a system).

Claim 5 is rejected under 35 U.S.C. 103(a) as unpatentable over Sievers in view of Nimura. Nimura teaches in 7:53-66 the use of a distance sensor that can be a digital computer coupled to an odometer, which clearly can be used to compute speed (e.g. distance traveled over time (e.g. a specific time interval), which is the definition of speed with respect to a vehicle's frame of reference. Clearly, such a method exists in the prior art – e.g. Sievers teaches in 3:55-60 the use of a refresh rate, e.g. that the position on the display is updated once in a given distance, where the update factor is varied according to the speed of the vehicle. Clearly, such a method at least hints and suggests the use of a distance sensor derived from or coupled with the speed sensor, and it would be obvious that since the relative distance is known (as well as absolute position, e.g. GPS, which both the systems of Nimura and Sievers have) could be used

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to compute the speed. IT would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Nimura and Sievers for the reasons set forth above, and the computation of speed in this way is well known in the art.

Claims 7, 9, 10, 13, 15, 20, 21, and 26 are rejected under 35 U.S.C. 103(a) as unpatentable over Sievers in view of Boyer (US 6,445,397 B1).

As to claims 9 and 21, Sievers does not expressly teach this limitation, while Boyer, which teaches a navigation system similar to that of Sievers and is clearly analogous art, teaches linear scaling of a display and that it is proportional to the increase in the rate (see 4:15-55, and particularly 4:35-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Sievers with Boyer, since Boyer teaches that the scaling effect is more effective visually to the user when performed this way (3:55-4:15). The rejection to claim 7 is incorporated by reference to deal with the additional limitation dependency hierarchy as for claim 21.

As to claims 7, 20, and 26, as explained above, the idea of having the speed and scale equal a constant with respect to a constant is not precisely always the case. As shown in Figure 6 of the instant specification, the chart illustrating the relationship between scale and speed has two lines, where those lines cross in the middle – however, none of those lines go to zero, and indeed lines 604 and 602 never total zero on the graph. It is clear that any lines in the same approximate relationship would produce a constant in the manner recited by applicant. As stated in 4:15-38, Boyer Figure 2 clearly shows a linear relationship with a plateau, where speed and scale would be a constant factor as required in the instant application, and further Boyer

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teaches that the scale is varied automatically with the speed of the vehicle (1:25-34), as the prior art well teaches. The idea of the constant is implied in that a linear relationship requires some resultant, and very clearly in Figure 2 of Boyer the resultant speed-scale graph certainly resembles that of Figure 6 of the instant specification. Motivation and combination is taken from claim 9 above.

As to claims 10 and 15, Boyer clearly teaches that when the scale changes, the rate curve is reduced, thusly causing the scaling to be proportional to the rate of change of the speed as set forth above (see 4:38-55). Motivation and combination is taken from claim 9 above.

As to claim 11, Boyer teaches the display of a road map in an automobile on display 10, as shown in Fig. 1. Motivation and combination is taken from claim 9 above.

As to claim 16, Sievers teaches that the map has a maximum scale (and the prior art teaches the same thing (2:5-22), and that it is desired for the operator to have a maximum amount of data at relevant times (3:20-41). Therefore, it would be obvious that since there is a maximum scale factor, there would obviously be a limit as to how fast an imperfect computer could execute such a rapid scaling operation, so there would prima facie be some hardware- and software-induced lag, wherein the system could not zoom in or out any more than to the maximum and/or minimum resolutions supported by the system, so it would be obvious that coupled with the software- and hardware-based limitations of a practical system, the system has a practical, if unstated, maximum rate of change of the display device. Further, Boyer clearly teaches that the system has a maximum scale factor (e.g. plateau) and would therefore logically have a



maximum rate of change of the display shown to the operator. Motivation and combination is taken from claim 9 above.

As to claim 13, clearly the system of Boyer (and the prior art taught therein, as in the rejection to claims 7 and 10 above, which is incorporated by reference) teaches that the scale is changed with respect the speed of the vehicle, and clearly it teaches that the display is resized based on the rate of speed of the vehicle, where a low speed and a high speed both constitute "intervals of speed" where an interval is taken to either be a) a range of speed of the vehicle or b) a set distance traveled over a set time by the vehicle.

Claims 8 and 22 are rejected under 35 U.S.C.103(a) as unpatentable over Sievers in view of Boyer as applied to claim 7, and further in view of Carpendale (Carpendale, M.S.T. "A Framework for Elastic Presentation Space." Ph.D. Thesis. March 1999).

As to claims 8 and 22, the concept of using an exponential function as part of a viewing interface is well known in the art, for example with the use of fisheye lens, see for example Carpendale page 74, where the equation forming the fisheye lens is pointed out. Further, various shapes of foci are shown on pages 74-77. On page 78, the idea of a plateau in the middle of a zoomed region with exponential drop-offs on both sides is shown.

The Carpendale reference is clearly directed to navigation of content space, which is clearly what the vast majority of applicant's specification is directed towards. IT is further directed to at least the same problem solving area, where that area consists of

navigating for example maps (pages 118-122 for example). Further, the Carpendale reference also teaches the idea of having a constant equal to a combination of scale (see for example page 104, and the idea of the circular lens, where the equation of a circle is prima facie equal to a constant). Finally, Carpendale further discusses navigating such an interface and how the various foci are manipulated. It would have been obvious to combine the capabilities of Carpendale with Sievers and Boyer for at least the above reasons, and also the fact that Carpendale provides additional visualization capabilities and other embodiments of scaling (e.g. hyperbolic and other non-linear techniques not discussed in the instant specification) that would obviously prove useful to a viewer of a navigation system.

### ***Conclusion***

The prior art made of record and relied upon is considered pertinent to applicant's disclosure – specifically, US patent 6,445,397 B1 to Boyer. Applicant's attention is drawn to this patent, particular 4:12-55 and Figure 2 therein, which shows a scale – speed relationship graph similar to that shown in the specification of the instant application that has a filing date – January 27, 1999. This patent would appear to be relevant to the parent case of the instant application; applicant's attention is drawn to the filing date; applicant's attention is also drawn to the Carpendale reference, which also has the earlier filing date.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric V. Woods whose telephone number is 571-272-7775. The examiner can normally be reached on M-F 7:30-4:30 alternate Fridays off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 571-272-7664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Eric Woods  
18 July 2005

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